

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 09531-203US1	Application No. 10/069,605
<b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary) (37 CFR §1.61(b))		Applicant Keith M. Skubitz et al.	
		Filing Date February 26, 2002	Group Art Unit 1647 1649

### U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
GE	AA	5,571,710	11/05/96	Barnett et al.			
GE	AB	5,595,887	01/21/97	Coolidge et al.			
GE	AC	5,965,710	10/12/99	Bodmer et al.			

### Foreign Patent Documents or Published Foreign Patent Applications

Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation	
							Yes	No
GE	AD							

### Other Documents (include Author, Title, Date, and Place of Publication)

Examiner Initial	Desig. ID	Document
GE	AE	Afar et al., "Tyrosine phosphorylation of biliary glycoprotein, a cell adhesion molecule related to carcinoembryonic antigen," <i>Biochimica et Biophysica Acta</i> , 1992, 1134:46-52
	AF	Bates et al., "A predicted three-dimensional structure for the carcinoembryonic antigen (CEA)," <i>FEBS Lett.</i> , 1992, 301:207-214
	AG	Beauchemin et al., "Association of biliary glycoprotein with protein tyrosine phosphatase SHP-1 in malignant colon epithelial cells" <i>Oncogene</i> , 1997, 14:783-790
	AH	Beauchemin et al., "Redefined nomenclature for members of the carcinoembryonic antigen family," <i>Exp. Cell Res.</i> , 1999, 252:243-249
	AI	Benchimol et al., "Carcinoembryonic antigen, a human tumor marker, functions as an intercellular adhesion molecule," <i>Cell</i> , 1989, 57:327-334
	AJ	Bishayee et al., "Ligand-induced Dimerization of the Platelet-derived Growth Factor Receptor," <i>J. Biol. Chem.</i> , 1989, 264:11699-11705
	AK	Blechman et al., "The fourth immunoglobulin domain of the stem cell factor receptor couples ligand binding to signal transduction," <i>Cell</i> , 1995, 80:103-113
	AL	Boehm et al., "Extended glycoprotein structure of the seven domains in human carcinoembryonic antigen by X-ray and neutron solution scattering and an automated curve fitting procedure: implications for cellular adhesion," <i>J. Mol. Biol.</i> , 1996, 259:718-736
	AM	Bos et al., "CD66 receptor specificity exhibited by neisserial Opa variants is controlled by protein determinants in CD66 N-domains," <i>Proc. Natl. Acad. Sci. USA</i> , 1998, 95:9584-9589
	AN	Bos et al., "Differential Recognition of Members of the Carcinoembryonic Antigen Family by Opa Variants of <i>Neisseria gonorrhoeae</i> ," <i>Infection and Immunity</i> , 1997, 65:2353-2361
	AO	Brümmer et al., "Association of pp60 <sup>c-src</sup> with biliary glycoprotein (CD66a), an adhesion molecule of the carcinoembryonic antigen family downregulated in colorectal carcinomas," <i>Oncogene</i> , 1995, 11:1649-1655
	AP	Carlos and Haran, "Leukocyte-endothelial adhesion molecules," <i>Blood</i> , 1994, 84:2068-2101
✓	AQ	Chen and Gotschlich, "CGM1a antigen of neutrophils, a receptor of gonococcal opacity proteins," <i>Proc. Natl. Acad. Sci. USA</i> , 1996, 93:14851-14856

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10/069,605**Information Disclosure Statement  
by Applicant**

(Use several sheets if necessary)

Applicant  
Keith M. Skubitz et al.Filing Date  
February 26, 2002Group Art Unit  
1647**Other Documents (include Author, Title, Date, and Place of Publication)**

Examiner Initial	Desig. ID	Document
GE	AR	Cochet et al., "Demonstration of Epidermal Growth Factor-induced Receptor Dimerization in Living Cells Using a Chemical Covalent Cross-linking Agent," <i>J. Biol. Chem.</i> , 1988, 263:3290-3295
	AS	Daniel et al., "Determination of the specificities of monoclonal antibodies recognizing members of the CEA family using a panel of transfectants," <i>Int. J. Cancer</i> , 1993, 55:303-310
	AT	Dveksler et al., "Cloning of the mouse hepatitis virus (MHV) receptor: expression in human and hamster cell lines confers susceptibility to MHV," <i>J. Virol.</i> , 1991, 65:6881-6891
	AU	Edlund et al., "Calmodulin Binds to Specific Sequences in the Cytoplasmic Domain of C-CAM and Down-regulates C-CAM Self-association," <i>J. Biol. Chem.</i> , 1996, 271:1393-1399
	AV	Gray-Owen et al., "CD66 carcinoembryonic antigens mediate interactions between Opa-expressing <i>Neisseria gonorrhoeae</i> and human polymorphonuclear phagocytes," <i>EMBO J.</i> , 1997, 16:3435-3445
	AW	Holmes et al., "Coronavirus receptor specificity," <i>Coronaviruses Molecular Biology and Virus-Host Interactions</i> , 1994, 342:261-266
	AX	Hsieh et al., "Tumor suppressive role of an androgen-regulated epithelial cell adhesion molecule (C-CAM) in prostate carcinoma cell revealed by sense and antisense approaches," <i>Cancer Res.</i> , 1995, 55:190-197
	AY	Hunter et al., "Evidence for regulated dimerization of cell-cell adhesion molecule (C-CAM) in epithelial cells," <i>Biochem. J.</i> , 1996, 320:847-853
	AZ	Jantschkeff et al., "A CD66a-specific, activation-dependent epitope detected by recombinant human signal chain fragments (scFvs) on CHO transfectants and activated granulocytes," <i>J. Leukoc. Biol.</i> , 1996, 59:891-901
	AAA	Kammerer and von Kleist, "CEA expression of colorectal adenocarcinomas is correlated with their resistance against LAK-cell lysis," <i>Int. J. Cancer</i> , 1994, 57:341-347
	ABB	Kammerer and von Kleist, "The carcinoembryonic antigen (CEA) modulates effector-target cell interaction by binding to activated lymphocytes," <i>Int. J. Cancer</i> , 1996, 68:457-463
	ACC	Kammerer et al., "Biliary glycoprotein (CD66a), a cell adhesion molecule of the immunoglobulin superfamily, on human lymphocytes: structure, expression and involvement in T cell activation," <i>Eur. J. Immunol.</i> , 1998, 28:3664-3674
	ADD	Khan et al., "Identification of three new genes and estimation of the size of the carcinoembryonic antigen family," <i>Genomics</i> , 1992, 14:384-390
	AEE	Kleinerman et al., "Consistent expression of an epithelial cell adhesion molecule (C-CAM) during human prostate development and loss of expression in prostate cancer: Implication as a tumor suppressor," <i>Cancer Res.</i> , 1995, 55:1215-1220
	AFF	Kleinerman et al., "Suppression of human bladder cancer growth by increased expression of C-CAM1 gene in an orthotopic model," <i>Cancer Res.</i> , 1996, 56:3431-3435
	AGG	Kuijpers et al., "CD66 Nonspecific Cross-reacting Antigens Are Involved in Neutrophil Adherence to Cytokine-activated Endothelial Cells," <i>J. Cell Biol.</i> , 1992, 118:457-466
	AHH	Kuijpers et al., "Cross-linking of the carcinoembryonic antigen-like glycoproteins CD66 and CD67 induces neutrophil aggregation," <i>J. Immunol.</i> , 1993, 151:4934-4940
	AII	Kunath et al., "Inhibition of colonic tumor cell growth by biliary glycoprotein," <i>Oncogene</i> , 1995, 11:2375-2382
✓	AJJ	Leusch et al., "Binding of <i>Escherichia coli</i> and <i>Salmonella</i> strains to members of the carcinoembryonic antigen family: differential binding inhibition by aromatic $\alpha$ -glycosides of mannose," <i>Infection and Immunity</i> , 1991, 59:2051-2057

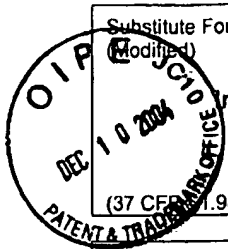
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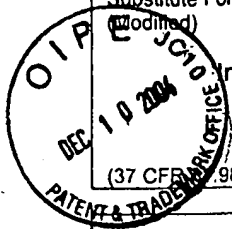


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**Other Documents (include Author, Title, Date, and Place of Publication)**

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GE	AKK	Lisowska et al., "The dimeric structure of carcinoembryonic antigen (CEA)," <u>Biochem. Biophys. Res. Comm.</u> , 1983, 115:206-211
	ALL	Lund-Johansen et al., "Activation of human monocytes and granulocytes by monoclonal antibodies to glycosylphosphatidylinositol-anchored antigens," <u>Eur. J. Immunol.</u> , 1993, 23:2782-2791
	AMM	Luo et al., "Suppression of tumorigenicity of breast cancer cells by an epithelial cell adhesion molecule (C-CAM1): the adhesion and growth suppression are mediated by different domains," <u>Oncogene</u> , 1997, 14:1697-1704
	ANN	Mayne et al., "Antibody By114 is selective for the 90 kD PI-linked component of the CD66 antigen: a new reagent for the study of paroxysmal nocturnal haemoglobinuria," <u>Br. J. Haematol.</u> , 1993, 83:30-38
	AOO	Metze et al., "Distribution and ultrastructural localization of the carcinoembryonic antigen (CEA) family in normal skin and cutaneous tumors," <u>J. Invest. Dermatol.</u> , 1992, Vol. 98, Abstract P165
	APP	Möller et al., "Biliary glycoprotein (BGP) expression on T cells and on a natural-killer-cell sub-population," <u>Int. J. Cancer</u> , 1996, 65:740-745
	AQQ	Morales et al., "Regulation of Human Intestinal Intraepithelial Lymphocyte Cytolytic Function by Biliary Glycoprotein (CD66a)," <u>J. Immunol.</u> , 1999, 163:1363-1370
	ARR	Nagel et al., "Genomic organization, splice variants and expression of CGM1, a CD66-related member of the carcinoembryonic antigen gene family," <u>Eur. J. Biochem.</u> , 1993, 214:27-35
	ASS	Neumaier et al., "Biliary glycoprotein, a potential human cell adhesion molecule, is down-regulated in colorectal carcinomas," <u>Proc. Natl. Acad. Sci. USA</u> , 1993, 90:10744-10748
	ATT	Nollau et al., "Dysregulation of carcinoembryonic antigen group members CGM2, CD66a (biliary glycoprotein), and nonspecific cross-reacting antigen in colorectal carcinomas," <u>Am. J. Pathol.</u> , 1997, 151:521-530
	AUU	Nollau et al., "Expression of CD66a (Human C-CAM) and other members of the carcinoembryonic antigen gene family of adhesion molecules in human colorectal adenomas," <u>Cancer Research</u> , 1997, 57:2354-2357
	AVV	Öbrink, "CEA adhesion molecules: multifunctional proteins with signal-regulatory properties," <u>Current Opinion in Cell Biology</u> , 1997, 9:616-626
	AWW	Oikawa et al., "A Specific Heterotypic Cell Adhesion Activity between Members of Carcinoembryonic Antigen Family, W272 and NCA, Is Mediated by N-domains," <u>J. Biol. Chem.</u> , 1991, 266:7995-8001
	AXX	Oikawa et al., "Cell adhesion activity of non-specific cross-reacting antigen (NCA) and carcinoembryonic antigen (CEA) expressed on cho cell surface: hemophilic and heterophilic adhesion," <u>Biochem. Biophys. Res. Comm.</u> , 1989, 164:39-45
	AYY	Oikawa et al., "Homotypic and heterotypic Ca <sup>++</sup> -independent cell adhesion activities of biliary glycoprotein, a member of carcinoembryonic antigen family, expressed on CHO cell surface," <u>Biochem. Biophys. Res. Comm.</u> , 1992, 186:881-887
	AZZ	Pensiero et al., "Binding of the coronavirus mouse hepatitis virus A59 to its receptor expressed from a recombinant vaccinia virus depends on posttranslational processing of the receptor glycoprotein," <u>J. Virol.</u> , 1992, 66:4028-4039
V	AAAA	Pignatelli et al., "Carcinoembryonic antigen functions as an accessory adhesion molecular mediating colon epithelial cell - collagen interactions," <u>Proc. Natl. Acad. Sci. USA</u> , 1990, 87:1541-1545

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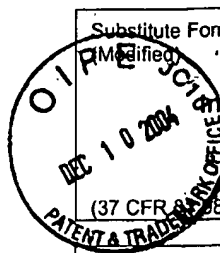


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GE	ABBB	Prado et al., "Susceptibility of colorectal-carcinoma cells to natural-killer-mediated lysis: relationship to CEA expression and degree of differentiation," <i>Int. J. Cancer</i> , 1995, 61:854-860
	ACCC	Prall et al., "CD66a (BGP), an adhesion molecule of the carcinoembryonic antigen family, is expressed in epithelium, endothelium, and myeloid cells in a wide range of normal human tissues," <i>J. Histochem. Cytochem.</i> , 1996, 44:35-41
	ADDD	Riethdorf et al., "Differential Expression of CD66a (BGP), a Cell Adhesion Molecule of the Carcinoembryonic Antigen Family, in Benign, Premalignant, and Malignant Lesions of the Human Mammary Gland," <i>J. Histochem. Cytochem.</i> , 1997, 45:957-964
	AEEE	Rojas et al., "Biliary glycoprotein, a member of the immunoglobulin supergene family, functions <i>in vitro</i> as a Ca <sup>2+</sup> -dependent intercellular adhesion molecule," <i>Cell Growth and Differentiation</i> , 1990, 1:527-533
	AFFF	Sauter et al., "Binding of nonspecific cross-reacting antigen, a granulocyte membrane glycoprotein, to <i>Escherichia coli</i> expressing type 1 fimbriae," <i>Infection and Immunity</i> , 1991, 59:2485-2493
	AGGG	Sippel et al., "Bile Acid Efflux Mediated by the Rat Liver Canalicular Bile Acid Transport/Ecto-ATPase Protein Requires Serine 503 Phosphorylation and Is Regulated by Tyrosine 488 Phosphorylation," <i>J. Biol. Chem.</i> , 1994, 269:19539-19545
	AHHH	Sippel et al., "Site-directed Mutagenesis within an Ectoplasmic ATPase Consensus Sequence Abrogates the Cell Aggregating Properties of the Rat Liver Canalicular Bile Acid Transporter/Ecto-ATPase/Cell CAM 105 and Carcinoembryonic Antigen," <i>J. Biol. Chem.</i> , 1996, 271:33095-33104
	AIII	Skubitz et al., "Antiserum to carcinoembryonic antigen recognizes a phosphotyrosine-containing protein in human colon cancer cell lines," <i>FEBS Lett.</i> , 1993, 318:200-204
	AJJJ	Skubitz et al., "CD63 associates with tyrosine kinase activity and CD11/CD18, and transmits an activation signal in neutrophils," <i>J. Immunol.</i> , 1996, 157:3617-3626
	AKKK	Skubitz et al., "CD66 family members are associated with tyrosine kinase activity in human neutrophils," <i>J. Immunol.</i> , 1995, 155:5382-5390
	ALLL	Skubitz et al., "CD66 monoclonal antibodies recognize a phosphotyrosine-containing protein bearing a carcinoembryonic antigen cross-reacting antigen on the surface of human neutrophils," <i>J. Immunol.</i> , 1992, 148:852-860
	AMMM	Skubitz et al., "CD50 monoclonal antibodies inhibit neutrophil activation," <i>J. Immunol.</i> , 1997, 159:820-828
	ANNN	Skubitz et al., "CD66a, CD66b, CD66c, and CD66d each independently stimulate neutrophils," <i>J. Leukocyte Biol.</i> , 1996, 60:106-117
	AOOO	Skubitz et al., "Monoclonal antibodies that recognize lacto-N-fucopentaose III (CD15) react with adhesion-promoting glycoprotein family (LFA-1/HMAC-1/GP 150,95) and CR1 on human neutrophils," <i>J. Immunol.</i> , 1987, 139:1631-1639
	APPP	Skubitz et al., "Summary of the CD66 Cluster Workshop," <i>Leukocyte Typing VI</i> , Kishimoto et al. (eds.), Garland Publishing, Inc., New York and London, pp. 992-1000
	AQQQ	Skubitz et al., "Stimulation of Neutrophil Adhesion to Endothelial Cells by Synthetic Peptides of CD66a," <i>Molecular Biology of the Cell</i> , 1999, Vol. 10, supplemental, Abstract 452 on page 78A
	ARRR	Skubitz et al., "Synthetic Peptides of CD66a Stimulate Neutrophil Adhesion to Endothelial Cells," <i>J. Immunol.</i> , 2000, 164(8):4257-4264
↓	ASSS	Springer, "Traffic signals for lymphocyte recirculation and leukocyte emigration: the multistep paradigm," <i>Cell</i> , 1994, 76:301-314

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Examiner Initial	Desig. ID	Document
GE	ATTT	Stocks and Kerr, "Stimulation of neutrophil adhesion by antibodies recognizing CD15 (Le <sup>x</sup> ) and CD15-expressing carcinoembryonic antigen-related glycoprotein NCA-160," <u>Biochem. J.</u> , 1992, 288:23-27
	AUUU	Stocks et al., "CD66: role in the regulation of neutrophil effector function," <u>Eur. J. Immunol.</u> , 1996, 26:2924-2932
	AVVV	Stocks et al., "CD66-dependent neutrophil activation: a possible mechanism for vascular selectin-mediated regulation of neutrophil adhesion," <u>J. Leukocyte Biol.</u> , 1995, 58:40-48
	AWWW	Stoffel et al., "Monoclonal, anti-domain and anti-peptide antibodies assign the molecular weight 160,000 granulocyte membrane antigen of the CD66 cluster to a mRNA species encoded by the biliary glycoprotein gene, a member of the carcinoembryonic antigen gene family," <u>J. Immunol.</u> , 1993, 150:4978-4984
	AXXX	Tanaka et al., "Decreased expression of biliary glycoprotein in hepatocellular carcinomas," <u>Int. J. Cancer</u> , 1997, 74:15-19
	AYYY	Teixeira et al., "The N-Domain of the Biliary Glycoprotein (BGP) Adhesion Molecule Mediates Homotypic Binding: Domain Interactions and Epitope Analysis of BGPC," <u>Blood</u> , 1994, 84:211-219
	AZZZ	Tetteroo et al., "Neutrophil activation detected by monoclonal antibodies," <u>J. Immunol.</u> , 1986, 136:3427-3432
	AAAAA	Thompson et al., "Carcinoembryonic antigen gene family: molecular biology and clinical perspectives," <u>J. Clin. Lab. Analysis</u> , 1991, 5:344-366
	ABBBB	Vaporciyan et al., "Rapid analysis of leukocyte-endothelial adhesion," <u>J. Immunol. Meth.</u> , 1993, 159:93-100
	ACCCC	Virji et al., "Carcinoembryonic antigens (CD66) on epithelial cells and neutrophils are receptors for Opa proteins of pathogenic neisseriae," <u>Mol. Microbiol.</u> , 1996, 22:941-950
	ADDDD	Virji et al., "The N-domain of the human CD66a adhesion molecule is a target for Opa proteins of <i>Neisseria meningitidis</i> and <i>Neisseria gonorrhoeae</i> ," <u>Mol. Microbiol.</u> , 1996, 22:929-939
	AEEEE	Watt et al., "CD66 Identifies a Neutrophil-Specific Epitope Within the Hematopoietic System That Is Expressed by Members of the Carcinoembryonic Antigen Family of Adhesion Molecules," <u>Blood</u> , 1991, 78:63-74
	AFFFF	Watt et al., "CD66 Identifies the Biliary Glycoprotein (BGP) Adhesion Molecule: Cloning, Expression and Adhesion Functions of the BGPC Splice Variant," <u>Blood</u> , 1994, 84:200-210
	AGGGG	Wertheimer et al., "Intercellular adhesion molecule-1 gene expression in human endothelial cells," <u>J. Biol. Chem.</u> , 1992, 267:12030-12035
	AHHHH	Wikström et al., "Homophilic intercellular adhesion mediated by C-CAM is due to a domain 1-domain 1 reciprocal binding," <u>Exp. Cell Res.</u> , 1996, 227:360-366
	AIIII	Williams et al., "Receptor for mouse hepatitis virus is a member of the carcinoembryonic antigen family of glycoproteins," <u>Proc. Natl. Acad. Sci. USA</u> , 1991, 88:5533-5536
	AJJJJ	Wright and Meyer, "Phorbol esters cause sequential activation and deactivation of complement receptors on polymorphonuclear leukocytes," <u>J. Immunol.</u> , 1986, 136:1759-1764
	AKKKK	Yamanaka et al., "Analysis of heterophilic cell adhesion mediated by CD66b and CD66c using their soluble recombinant proteins," <u>Biochem. Biophys. Res. Comm.</u> , 1996, 219:842-847
↓	ALLLL	Yarden and Schlessinger, "Epidermal growth factor induces rapid, reversible aggregation of the purified epidermal growth factor receptor," <u>Biochemistry</u> , 1987, 26:1443-1441

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GE	AMMMM	Yokomori and Lai, "Mouse hepatitis virus utilizes two carcinoembryonic antigens as alternative receptors," <u>J. Virol.</u> , 1992, 66:6194-6199
↓	ANNNN	Zhou et al., "Homophilic Adhesion between Ig Superfamily Carcinoembryonic Antigen Molecules Involves Double Reciprocal Bonds," <u>J. Cell Biol.</u> , 1993, 122:951-960
↓	AOOOO	Zhou et al., "Specificity of anti-carcinoembryonic antigen monoclonal antibodies and their effects on CEA-mediated adhesion," <u>Cancer Research</u> , 1993, 53:3817-3822

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